



SCIENCE BYTES

APRIL 13, 2009 VOLUME 32

This is an information exchange that is available to all teachers in the Anchorage School District. Please read and then DO it!

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For your Calendar:

2009 - Alaska Math & Science Conference

INQUIRY - The Bridge to Understanding

October 14-17, 2009 Juneau, AK

NSTA Conferences 2009-2010

Web Seminar - Toshiba/NSTA ExploraVision Program

Join us on Tuesday, April 14, for the next web seminar focusing on the Toshiba/NSTA ExploraVision Awards program. Now in its 17th year, ExploraVision encourages K-12 students of all interest, skill, and ability levels to create and explore a vision of future technology by combining their imaginations with the tools of science. This Web Seminar will include information and resources that will help K-12 teachers integrate the ExploraVision program into next year's classroom. Presenters are ExploraVision Ambassadors, teachers who have sponsored re-

gional and national winning teams and have had success in motivating and guiding multiple student teams in the past several years. During these live web seminars, presenters will share their ExploraVision experiences and answer questions live from participants. Register today at http://learningcenter.nsta.org/products/symposia_seminars/ExploraVision/webseminar.aspx?lid=exp.

ERROR re: PAEMST Nominations for 2009

We apologize for the Presidential Awards for Excellence in Mathematics and Science Teaching Express message that was sent on April 7.

Nominations closed for the current year on April 1. Those educators that have already been nominated have until May 1 to complete the application process. It is too late for educators to be nominated for the current award.

You are invited to visit the site in October 2009 when the nominations for K-6 teachers will be available.

For more information about the PAEMST Program, please visit their Web site at www.paemst.org.

The National Science Foundation administers PAEMST on behalf of The White House Office of Science and Technology Policy.

from Space Explorers, Inc., Planetary Times NASA PREPARES FOR NEXT SPACE SHUTTLE MISSION

NASA's final space shuttle mission to the Hubble Space Telescope, STS-125, is scheduled for May 12, 2009. Scott Altman will serve as commander and Capt. Gregory C. Johnson is the pilot. Additional crew members include John Grunsfeld and Mike Massimino, and first-time space fliers Andrew Feustel, Michael Good and Megan McArthur.

More Info... <http://news.space-explorers.com/?v=7=4=1>
<<http://news.space-explorers.com/?v=7&i=4&a=1>>

NASA TEAM FINDS RICHES IN METEORITE TREASURE HUNT

Just before dawn on Oct. 7, 2008, an SUV-sized asteroid entered Earth's atmosphere and exploded harmlessly over the Nubian Desert of northern Sudan. Scientists expected the asteroid, called 2008 TC3, had blown to dust in the resulting high-altitude fireball.

More Info... <http://news.space-explorers.com/?v=7=4=2>
<<http://news.space-explorers.com/?v=7&i=4&a=2>>

SATELLITES SHOW ARCTIC LITERALLY ON THIN ICE

The latest Arctic sea ice data from NASA and the National Snow and Ice Data Center show that the decade-

long trend of shrinking sea ice cover is continuing. New evidence from satellite observations also shows that the ice cap is thinning as well.

More Info... <http://news.space-explorers.com/?v=7=4=3>
<<http://news.space-explorers.com/?v=7&i=4&a=3>>

ONE MARS ROVER SEES A DISTANT GOAL; THE OTHER TAKES A NEW ROUTE

On a plain that stretches for miles in every direction, the panoramic camera on NASA's Mars rover Opportunity has caught a first glimpse on the horizon of the uplifted rim of the big crater that has been Opportunity's long-term destination for six months.

More Info... <http://news.space-explorers.com/?v=7=4=4>
<<http://news.space-explorers.com/?v=7&i=4&a=4>>

GRANT OPPORTUNITIES

Educator grant opportunities announced, deadlines approaching.

More Info... <http://news.space-explorers.com/?v=7=4=5>
<<http://news.space-explorers.com/?v=7&i=4&a=5>>

ASTA - Accepting Nominations for Emma Walton Award

GUIDELINES

The Alaska Science Teachers Association annually awards one citation for distinguished service in the field of science education. ASTA members are invited to share in the selection process by sending nominations of Alaska educators to ASTA for review by the Awards and Recognitions Committee.

The award is designed to recognize Alaska educators who have made extraordinary contributions to the advancement of science education in the sciences and science teaching. Each award consists of up to \$500 to travel to the biannual Alaska Math/Science Conference, where a formal citation and a suitable token of appreciation for the outstanding service rendered by the recipient will be given. For complete information, please check the ASTA website. <http://www.aksta.org>

from Science Matters (formerly Building a Presence BaP) Newsletter

National Environmental Education Week is April 12-18: Be Water Wise!

<http://www.EEWeek.org> <<http://www.EEWeek.org>>

National Environmental Education Week (EE Week) is the nation's largest organized environmental education event. Held each April, EE Week promotes understanding and protection of the natural world by actively engaging K-12th grade students and educators of

all subjects in an inspired week of environmental learning and service before Earth Day. Join the thousands of schools, nature centers, zoos, museums, and aquariums nationwide who have made a commitment to engage students in environmental learning through participation in EE Week!

This year's EE Week theme is Be Water Wise! Registered partners will have access to a wide variety of FREE environmental education resources, including:

- * Standards-based environmental education lessons and activities, including water conservation, watershed, and water quality curricula,

- * Access to EE Week's school water audit tool in which students "find the leaks" in water usage at school,

- * Opportunities for online communication and knowledge-sharing with educators from across the country, including participation in the EE Week Photo Blog contest,

- * Participation in EE Week's Ask an Expert feature, in which your students' questions about water are answered by a panel of researchers and water professionals,

- * Monthly electronic newsletters highlighting the latest EE curricula, professional development, and funding opportunities,

- * Certificates of participation for themselves and their students, and

- * A coupon for \$10 off your purchase at Acorn Naturalists, offering over 8,000 science and nature resources for the trail and classroom.

You can join a national network of educators dedicated to increasing environmental literacy, promote environmental learning, and gain national exposure for your school or organization by registering today at the URL above.

Questions? Contact Jessica Culverhouse at eeweek@neefusa.org or call 202-261-6484.

K-12: Science in Action: NPR program on Suspension Bridges

<http://www.npr.org/templates/story/story.php?storyId=100947959>

<<http://www.npr.org/templates/story/story.php?storyId=100947959>>

As Suspension Bridges Age, A Search For Failures: How do you know when a suspension-bridge cable is about to fail? That's the question engineers at Columbia University in New York are trying to address in a new experiment.

Visit the web site to hear Joe Palca's report, to see videos, and to get more information.

K-12: Win an iPod for your feedback

<http://www.exploratorium.edu/imaging.station/>

The Microscope Imaging Station is looking for educators to evaluate this Web site that has still images, videos, articles, classroom activities, and other educational resources based on research-grade light microscope images. Review the Web site and take the online survey to win a chance for an iPod.

Gr 5-8: Is your student the Top Young Scientist?

<http://www.youngscientistchallenge.com>

<http://www.youngscientistchallenge.com>

The Discovery Education 3M Young Scientist Challenge, the premiere national science competition for students in grades 5 through 8, is now open for entries. Students must complete a video entry about one of four assigned topics and submit it online before May 20th, 2009*.

The top 10 students in the country will each win a series of prizes, including \$1,000 and an all-expense-paid trip to the competition finals in New York City this fall.

The winning student will receive \$50,000 in U.S. savings bonds and be named America's Top Young Scientist.

Teachers who nominate their students to participate will be entered into a drawing, and one lucky teacher will also receive an all-expense paid trip to New York City to participate in the final competition as an honorary host or judge!

*Contest ends May 20th, 2009. Please visit for official rules.

Gr 6-12: Apply to be a member of the 2009-2010 NSTA New Science Teacher Academy

<http://www.nsta.org/academy>

Bayer Corporation's Bayer USA Foundation has awarded the National Science Teachers Association (NSTA) a \$200,000 grant to create the Bayer-NSTA Fellows program and to expand the NSTA New Science Teacher Academy.

This means that this spring, Bayer and NSTA will issue a call for entries to the 2009-2010 NSTA New Science Teacher Academy. Science teachers located throughout the country who will be entering their second or third year of teaching and whose schedule is a minimum of 51 percent middle or high school science, can apply to the become an NSTA Fellow. For more information about the NSTA New Science Teacher Academy, to learn how to apply to become a fellow and 2009-2010 deadline information please visit the URL above. And watch this space for the call for entries.

Understanding Science One Website at a Time

<http://undsci.berkeley.edu/> <<http://undsci.berkeley.edu/>>

A new website funded by the National Science Foundation offers a window to a better understanding about how dynamic and creative the scientific process really is. Understanding Science is a “fun, accessible, and free resource that accurately communicates what science is and how it really works.” The site, intended for both the general public and K-16 teachers, draws students into real-life examples and looks at the social side of science, science and society, and asks, “What has science done for you lately?” It also provides users with a comprehensive science toolkit. Teacher resources are targeted to specific grade bands.

Flinn's eLearning Video Series—Only \$9.95! Online “Teacher Training” Videos for Middle School Science Teachers

Flinn Scientific has just released a new, low-cost online eLearning Video Series to help science teachers build their content knowledge and teaching strategies—making it easier for their students to learn specific topics. Middle school teachers will find videos targeting the following three topics particularly valuable in building physical science teaching skills:

The Flinn eLearning Video Series features 20 award-winning high school chemistry teachers demonstrating their best activities and sharing enormous amounts of content knowledge, teaching tips and instructional techniques. Each video is approximately 40 minutes in length containing multiple episodes and support materials printable as PDFs and can be viewed multiple times. Teachers can watch and learn, from home or school, as master teachers model their styles and discuss strategies that have proven to be successful. To view free samples go to: www.flinnsci.com

K-12: Got a great lesson or assessment or instructional strategy?

<http://www.nsta.org/conferences/sessions.aspx?lid=tnav>
<<http://www.nsta.org/conferences/sessions.aspx?lid=tnav>>

The deadline for proposals to present at the 2010 NSTA National Conference in Philadelphia is April 15. Get your proposal organized and submit it online so you can share your work with others, attend sessions and workshops, visit the exhibit hall, and hear great special speakers in this outstanding professional development opportunity.

K-12: Science360 News Service: Brought to You by NSF

<http://news.science360.gov/>
<<http://news.science360.gov/>>

Science360, published by the National Science Foundation (NSF), aims to deliver the full-spectrum of what's new in global science to everyone who has ever wondered what's going on in scientific research and discovery. The news service gathers news from wherever science is happening—scientists, college and university press offices, popular and peer-reviewed journals, dozens of National Science Foundation science and engineering centers, and funding sources that include government agencies, not-for-profit organizations and private industry—and makes it widely available on the Web, via email and RSS.

K-12: News of a different kind! April, 2009 is Math Awareness Month

<http://www.mathgoodies.com/mam/>
<<http://www.mathgoodies.com/mam/>>

Math Awareness Month is held each year in April, and is sponsored by the Joint Policy Board for Mathematics. This year's theme is Mathematics and Climate. Scientists use mathematics to better understand oceans, the atmosphere, and polar ice caps. You are invited to go on a WebQuest to answer these questions:

- * How long will summer Arctic sea ice survive?
- * Are hurricanes getting more intense?
- * How much will sea level rise as ice sheets melt?
- * How do humans impact on climate change?
- * How is global climate monitored?

Mathematics and Climate are very relevant to our world today, so join the group and explore these important issues!

Gr K-8: Do you need a Dynamic, Online Destination to Advance STEM Education?

<http://www.FuelOurFutureNow.com>
<<http://www.FuelOurFutureNow.com>>

Igniting imaginations and fueling student curiosity in science, technology, engineering, and math topics, the United States Department of Energy, the X PRIZE Foundation and Discovery Education have created, a new dynamic, online knowledge center inspired by the Progressive Automotive X PRIZE.

Introduced to educators during an interactive workshop presented at the National Science Teachers Association's National Conference in New Orleans, La., www.FuelOurFutureNow.com is an empowering resource that engages students in the science of alternative

fuels and energy-efficient engineering. Featuring targeted curriculum and lesson plans for all grade levels, as well as high-quality video, dynamic interactives and additional resources from the United States Department of Energy, teachers can use the online knowledge center to achieve their science, technology, engineering, and math (STEM) goals.

The goal of the Progressive Automotive X PRIZE is to inspire a new generation of viable, super fuel-efficient vehicles that offer more consumer choices. Together, parents and students can explore a variety of grade appropriate STEM topics through a number of exciting activities.

K-2 students will be challenged to find out what makes cars go, while students in grades 3-5 will focus on building the skills needed to learn about force and motion and efficient energy transfer within a vehicle.

Students in grades 6-8 will investigate fuel efficiency and develop a futuristic, energy efficient vehicle, and high school students will be tasked with analyzing patterns in mass transit issues.

For more information about Discovery Education, visit www.discoveryeducation.com or call 800-323-9084.

Cassini Scientist for a Day Essay Contest

Entries for the NASA Spring 2009 Cassini Scientist for a Day Essay Contest are due April 30, 2009

The Cassini Scientist for a Day contest challenges students to become NASA scientists studying Saturn. Participants examine three target images taken by Cassini and choose the one they think will yield the best scientific results. This choice must then be supported in a 500-word essay. Teaming up is encouraged. Winners will participate in a teleconference with Cassini scientists.

The contest is open to all students in the United States from grades 5-12, working alone or in groups of up to four students. The essays will be divided into three groups: grades 5-6, 7-8 and 9-12. All submissions must be students' original work. Each student can submit only one entry.

Deadline for Spring 2009 submissions is noon Pacific time (3 p.m. EDT) on April 30, 2009.

For more information, visit <http://saturn.jpl.nasa.gov/scientistforaday/>. If you have questions about this contest, please e-mail your inquiries to scientistforaday@jpl.nasa.gov.

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April 22nd is Earth Day

Celebrate Earth Day with your students and talk about ways to appreciate nature and protect our Earth. What are some ways in which your students can help raise awareness on important issues like the environment?

Professional Development Opportunities in Denali National Park!

The Murie Science and Learning Center invites you to participate in one of our exciting summer seminars. Earn one professional development credit from the University of Alaska while immersing yourself in:

Field Seminars

June 8 - 10: High Country Wildflowers for Beginners

<http://www.murieslc.org/static/1238/high-country-wildflowers-field-seminar> with Verna Pratt

June 12 - 14: High Country Wildflowers: A Closer Look

<http://www.murieslc.org/static/1239/high-country-wildflowers-closer-look-field-seminar> with Verna Pratt

June 15 - 17: Knowledge informs Art: Drawing inspiration from Denali

<http://www.murieslc.org/static/1241/knowledge-informs-art-drawing-inspiration-from-denali-field-seminar> with Karin Franzen

June 26 - 28: Dall Sheep and their Predators

<http://www.murieslc.org/static/1243/dall-sheep-and-their-predators-field-seminar> with Ken Whitten

July 3 - 5: Wildlife Tracking and Signs

<http://www.murieslc.org/static/1246/wildlife-tracking-field-seminar> with Tim Buechle

July 24 - 26: The Science of Fly-Fishing

<http://www.murieslc.org/static/1248/science-of-fly-fishing-field-seminar> with Shann Jones

Jul 31 – Aug 2: Pioneers of Denali: the Creation of Mt. McKinley National Park

<http://www.murieslc.org/static/1249/pioneers-of-denali-the-creation-of-mt-mckinley-national-park-field-seminar>

with Tom Walker

August 7 - 9: Denali Field Journaling

<http://www.murieslc.org/static/1250/denali-field-journaling-seminar> with Tom Walker

August 28 - 30: The Turning Tundra: How Plants and Animals Prepare for Winter

<http://www.murieslc.org/static/1253/the-turning-tundra-a-field-seminar> with Nan Eagleson

Seminars for Families

Jun 29 – Jul 2: Denali Dinosaurs

<http://www.murieslc.org/static/1531/denali-dinosaurs-a-family-seminar-june-29-july-1> for Ages 8 and Older

August 14 – 16: Denali Wildlife

<http://www.murieslc.org/static/1247/denali-wildlife-a-family-seminar> for Ages 8 and Younger

Teacher Trainings – just for you!

July 6 – 8: Subarctic Science, Sustainability and Students: Building Bridges

<http://www.murieslc.org/static/1236/subarctic-science-sustainability-and-students-building-bridges> with Kristen Friesen

July 20 – 22: The World of Wolves

<http://www.murieslc.org/static/528/world-of-wolves-teacher-training> with Kristen Friesen

Courses include:

- v Small group size of 10 participants.
- v Staying at a field camp
- v <http://www.murieslc.org/static/1258/field-camp-accommodations> located 29 miles inside Denali National Park along the Teklanika River.
- v All meals, accommodations, transportation, and instruction.
- v 10% discount available to members of Alaska Geographic.

For more information or to register:

- v go to www.murieslc.org, or click on the links above
- v email courses@murieslc.org
- v call 1-888-688-1269.

Courses offered by Alaska Geographic through the Murie Science and Learning Center at Denali National Park and Preserve.
